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UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Ismael Gracia Bobed
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Group Art Unit: 3781
Examiner: Stephen J. Castellano
Title: WASHING MACHINE LYE CONTAINER

Mail Stop Appeal Brief - Patents

Commissioner for Patents
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APPEAL BRIEF

Pursuant to 37 CFR 1.192, Appellants hereby file an Appeal Brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

TABLE OF CONTENTS

(1) REAL PARTY IN INTEREST	3
(2) RELATED APPEALS AND INTERFERENCES	3
(3) STATUS OF CLAIMS	3
(4) STATUS OF AMENDMENTS	3
(5) SUMMARY OF CLAIMED SUBJECT MATTER.....	3
(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL	7
(7) ARGUMENT	7
(8) CONCLUSION.....	14
CLAIMS APPENDIX	15
EVIDENCE APPENDIX	20
RELATED PROCEEDINGS APPENDIX.....	21

(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH by virtue of an Assignment executed on September 28, 2005, which is recorded at Reel 16599, Frame 264 of the U.S. Patent & Trademark Assignment Records, effective September 29, 2005.

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 1-12, 14-18, 22, 29 and 30 have been canceled, and claims 13, 19-21, 23-28 and 31-40 are pending in the application. Claims 13, 19-21, 23, 25-28, 31-34, 39 and 40 stand rejected. The August 7, 2009 Office Action also objects to claims 24 and 31-40. The final rejections of claims 13, 19-21, 23, 25-28, 31-34, 39 and 40, and the objections to claims 24 and 31-40 are being appealed.

(4) STATUS OF AMENDMENTS

All Amendments, including the Amendment filed April 14, 2009, have been entered.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

A description of the subject matter recited in the pending claims that are argued separately is set forth below, along with an indication of the portions of the specification and drawings that provide support for these features. Because the dependency of the claims no longer follows numerical order, the following description is instead presented in dependency order.

A. Claim 23

Claim 23 is directed to a lye container for a washing machine. The features of claim 23 are illustrated in Figures 1-4 of the application. The following description contains reference numbers that are shown in Figures 1-4.

Claim 23 recites a first container portion 1 and a second container portion 2 that are removably connected to one another. The first container portion 1 has a first radial extension 3 having a front section facing the second container portion 2 and a rear section facing away from the second container portion 2. See Figures 1-4 and the specification between page 6, line 30 and page 7, line 4.

An opening 4 extends through the first radial extension 3 and has an inner diameter. The diameter of the opening 4 near the rear section is greater than the diameter near the front section. See Figure 3 and the specification at page 6, lines 30-36.

Claim 23 recites that the second container portion 2 has a second radial extension that is removably engagable with the first radial extension 1, the engagement of the first and second radial extensions helping to create a seal between the first and second container portions. See Figure 4 and the specification at page 6, lines 23-28 and between page 7, line 25 and page 8, line 5.

Claim 23 recites a pin 8 that extends in an axial direction from the second radial extension to an outer end. Claim 23 recites that the pin 8 includes an outer diameter, an axial through hole 10, and longitudinal grooves 9 extending along the pin 8. Claim 23 recites that the maximum outer diameter of the pin 8 is greater than the minimum inner diameter 15 of the opening 4. See Figures 2 and 3, and the specification between page 6, line 30 and page 7, line 14.

Claim 23 recites that the pin 8 is at least partially disposed within the opening 4 when the second radial extension engages the first radial extension. See Figure 4, and the specification between page 7, line 25 and page 8, line 5.

Claim 23 recites that a dowel 13 is removably disposed within the axial through hole 10, and that the dowel helps to maintain the second radial extension 2 in

engagement with the first radial extension 1. See Figure 4 and the specification between page 7, line 35 and page 8, line 9.

B. Claim 21

Claim 21 depends from claim 23 and recites additional features. Specifically, claim 21 further recites a concentric protective projection 14 that is formed on the second container portion 2 around a first end of the axial through hole 10 that is opposite the outer end of the pin 8. Claim 21 recites that the concentric protective projection protects the dowel 13 when it is held at the first end of the axial through hole 10. See Figures 2 and 3, which illustrate the concentric protective projection 14 protecting the dowel 13 while it is held at the first end of the axial through hole 10. See the specification at page 7, lines 16-19.

C. Claim 31

Claim 31 is directed to a lye container for a washing machine. Claim 31 recites a first container portion 1 having a first radial extension 3 with first and second sides, wherein an opening 4 passes through the first radial extension 3 from the first side of the first radial extension 3 to the second side of the first radial extension 3. Claim 31 also recites that an inner diameter of the opening 4 increases from an interim portion of the opening to the second side of the first radial extension. See Figure 3, and the specification between page 6, line 30 and page 7, line 4.

Claim 31 further recites a second container portion 2 having a second radial extension with first and second sides, wherein the first side of the second radial extension is removably joined to the first side of the first radial extension 1 to form the lye container. See Figure 4 and the specification between page 7, line 25 and page 8, line 5.

Claim 31 also recites that a pin 8 having expandable sidewalls extends from the first side of the second radial extension, the pin 8 having an outer diameter that is larger than a minimum inner diameter 15 of the opening 4 on the first radial extension 3.

Claim 31 further recites that the pin 8 is at least partially disposed within the opening 4

when the second radial extension engages the first radial extension 3. See Figure 4 and the specification between page 7, line 25 and page 8, line 5.

Claim 31 also recites that an axial through hole 10 extends from the first side of the second radial extension, through the pin 8, to the second side of the second radial extension. See Figures 3 and 4, and the specification at page 7, lines 10-14.

Claim 31 recites that a dowel 13 is removably disposed within the axial through hole 10, and that when the dowel 13 is disposed within the pin 8, the dowel 13 expands the sidewalls of the pin 8 outward so that they engage the inner diameter of the opening 4 in the first radial extension 3 to fix the second container portion 2 to the first container portion 1. See Figure 4, and the specification between page 7, line 25 and page 8, line 5.

D. Claim 33

Claim 33 depends from claim 31 and recites additional features. Specifically, claim 33 further recites that a protective projection 14 extends from the second side of the second radial extension, the protective projection 14 surrounding the dowel 13 when it is held in the axial through hole 10 at the second side of the second radial extension. See Figures 2 and 3, and the specification at page 7, lines 16-19.

E. Claim 39

Claim 39 depends from claim 31 and recites additional features. Specifically, claim 39 further recites that when the dowel 13 is disposed within the pin 8, the entire shaft of the dowel 13 is accommodated within the axial through hole 10. See Figure 4 and the specification between page 7, line 35 and page 8, line 5.

F. Claim 40

Claim 40 depends from claim 39 and recites additional features. Specifically, claim 39 further recites projection stops 7 that limit the amount that the dowel 13 can travel along the axial through hole 10 such that when the dowel 13 is moved to a

position inside the pin 8, the dowel 13 is prevented from projecting out of the pin 8. See Figures 1, 3 and 4 and the specification at page 7, lines 6-8 and lines 25-33.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 31-40 are objectionable because of the language recited in claim 31.

B. Whether the subject matter recited in claim 40 lacks support in the originally filed application under 35 U.S.C. §112, first paragraph.

C. Whether claims 13, 21, 23, 25, 26, 28 and 31-33 are obvious, under 35 U.S.C. §103(a) over European Patent No. 789104 to Boved (hereinafter "Boved"), in view of European Patent No. 961374 to Bertoldo (hereinafter "Bertoldo").

D. Whether claim 34 is obvious, under 35 U.S.C. § 103(a) over Boved, in view of Bertoldo, and further in view of U.S. Patent No. 6,324,731 to Pliml (hereinafter "Pliml").

E. Whether claim 39 is obvious, under 35 U.S.C. § 103(a) over Boved, in view of Bertoldo, and further in view of U.S. Patent No. 4,276,806 to Morel (hereinafter "Morel").

F. Whether claims 19, 20 and 27 are obvious, under 35 U.S.C. § 103(a) over Boved, in view of Bertoldo, and further in view of U.S. Patent No. 4,874,276 to Iguchi (hereinafter "Iguchi").

(7) ARGUMENT

A. The Objection to Claims 31-40

The Office Action objects to claims 31-40 because of the recitation of the word "interim." Specifically, claim 31 recites that an inner diameter of the opening in the first radial extension increases from an interim portion of the opening to the second side of the first radial extension.

An embodiment including this feature of claim 31 is illustrated in Figures 3 and 4. As shown therein, the opening 4 in the first radial extension 3 has its smallest diameter

15 between the first and second sides of the opening. Thus, the inner diameter of the opening 4 in the first radial extension 3 increases from this position to the second side of the first radial extension.

It is respectfully submitted that one of ordinary skill in the art, reading claim 31, and viewing Figure 4, would immediately understand that the smallest diameter portion 15 illustrated in Figures 3 and 4 corresponds to the recited "interim position." Thus, it is respectfully submitted that claim 31, as presently phrased, is clear and definite. Accordingly, it is respectfully submitted that the objection to claims 31-40 should be withdrawn.

B. Claim 40 Is Proper Under §112, First Paragraph

As noted above, claim 40 depends from claims 31 and 39 and further recites projection stops that limit the amount that the dowel can travel along the axial through hole such that when the dowel is moved to a position inside the pin, the dowel is prevented from projecting out of the pin.

As also noted above, Figures 1, 3 and 4 show an embodiment including the recited projection stops 7. As shown in Figure 1, the projection stops 7 extend radially inward from the inner wall of the opening 4 towards a central longitudinal axis of the opening 4. As also shown in Figure 1, the projection stops 7 extend radially inward a sufficient distance to prevent the dowel 13 from projecting out of the end of the pin 8 when it is driven from the position shown in Figure 3 to the position shown in Figure 4.

Because of the clear disclosure provided in originally filed Figure 1, it is respectfully submitted that the originally filed application provides sufficient support for the subject matter recited in claim 40. Accordingly, it is respectfully submitted that the rejection of claim 40 under §112, first paragraph, should be withdrawn.

C. Claims 13, 21, 23, 25, 26, 28 and 31-33 Are Allowable

i. Claims 13, 23, 25, 26 and 28

As noted above, the August 7, 2009 Office Action rejects independent claim 23 under 35 U.S.C. §103(a) over Boved, in view of Bertoldo. For the reasons detailed below, it is respectfully submitted that this combination of references is improper.

The Boved reference discloses a system for joining two halves of a plastic tub of a washing machine. As shown in Figure 1 of Boved, the closure mechanism includes axial projections 7 formed on one half of the plastic tank, the axial projections including triangular shaped flanges 11 at distal ends. The other half of the plastic tank includes a plurality of radial cavities 8 which receive the radial projections 7. A projection 10 on the radial cavities 8 locks against the triangular-shaped flanged ends 11 of the radial projections 7 to lock the first half of the tank to the second half of the tank. This arrangement provide a very secure connection between the two halves of the tank.

The Bertoldo reference discloses an electrical connector box which encloses electrical wiring. The box includes a main body portion 20 and a cover plate 13. The cover plate 13 is attached to the main body 20 with a plurality of pins 68. As shown in Figures 4 and 5, stop tabs 50 on the cover 13 extend down into circular holes 30 in the main body portion 20. Distal ends 56 of the stop tabs 50 can expand outward against an enlarged diameter portion 36 of the holes 30. Insertion of the shaft 60 of the pins 68 into an interior of the stop tabs 50 forces the distal ends 56 of the stop tabs 50 outward to hold the cover 13 on the main body portion 20.

The Office Action asserts that it would have been obvious to one of ordinary skill in the art to replace the closure mechanism disclosed in Boved with the closure mechanism disclosed in Bertoldo. For the reasons discussed below, it is respectfully submitted that one of ordinary skill in the art would not have made such a substitution.

The Bertoldo mechanism is intended to be used on small electrical connector boxes. These connector boxes merely enclose electrical wiring. The cover of an electrical connector box as disclosed in Bertoldo does not experience any significant forces which would tend to remove the cover from the main body of the electrical connector box. As a result, the closure mechanism of such an electrical connector box

does not need to provide a great deal of securing force. And, in fact, Bertoldo's closure mechanism is not likely to provide a great deal of fastening force. If any significant amount of force were to push the cover of the Bertoldo electrical box upward, the closure mechanism would be unlikely to hold the cover on the main body.

The present application is directed to a closure mechanism which is used to connect two halves of the lye container (or wash tub) of a washing machine together. The two halves of the lye container must be water-tight when they are joined together. In addition, the forces which tend to force the two halves apart are significant. The lye container will be filled with a mixture of water and washing fluids, and will also contain a load of laundry. Furthermore, when the washing machine is in operation, and a rotating drum within the lye container is rotating, the lye container will be subjected to significant amounts of vibration. These forces tend to cause the two halves of the lye container to separate. For all these reasons, it is very important that the closure mechanism used to attach the two halves of the lye container together be extremely secure and never allow fluids within the lye container to leak.

It is respectfully submitted that one of ordinary skill in the art, viewing the Boved and Bertoldo references, would have had no motivation to substitute the relatively weak Bertoldo closure mechanism for the far more secure closure mechanism shown in Boved. As noted above, the Bertoldo closure mechanism would be highly unlikely to provide the degree of fixation force required for the lye container of a washing machine. The Bertoldo mechanism would simply not provide sufficient mechanical strength for this purpose. For at least these reasons, it is respectfully submitted that one of ordinary skill in the art would never have thought to substitute the Bertoldo closure mechanism for the one provided in Boved. Accordingly, it is respectfully submitted that the combination of references is improper, and that the rejection of claim 23 should be withdrawn. Claims 23, 25, 26 and 28 depend from claim 23 and are allowable for the same reasons.

ii. Claim 21

Claim 21 depends from claim 23. It is respectfully submitted that claim 23 is allowable for all the reasons discussed above in connection with claim 21.

In addition, claim 21 recites additional features which are not suggested by even the improper combination of Boved and Bertoldo. Claim 21 further recites a concentric protective projection which is formed on the second container portion around a first end of the axial through-hole opposite the outer end of the pin. Claim 21 recites that the concentric protective projection protects the dowel when it is held at a first end of the axial through-hole (the open or un-fixed position). Neither Boved nor Bertoldo disclose or suggest the claimed concentric protective projection.

Boved lacks any feature similar to the recited dowel, let alone the concentric protective projection.

While Bertoldo discloses a dowel, there are no features of the Bertoldo enclosure and closure mechanism which correspond to the recited concentric protective projection. For instance, when the dowel 60/68 of the Bertoldo closure mechanism is held at a first end of the axial through hole, as shown in Figure 4, no part of the cover 13 protects the dowel 60/68. Instead the upper portions of the dowel 60/68 are fully exposed.

Because neither Boved nor Bertoldo disclose or suggest the concentric protective projection recited in claim 21, is it respectfully submitted that claim 21 is allowable over even the improper combination of these references. Withdrawal of the rejection of claim 21 on these additional grounds is also requested.

iii. Claims 31 and 32

As noted above in connection with independent claim 23, one of ordinary skill in the art would not have been motivated to replace the secure Boved attachment mechanism with the relatively weak Bertoldo closure mechanism. Thus, for the same reasons discussed above in connection with claim 23, it is respectfully submitted that the combination of Boved and Bertoldo is improper, and that the rejection of claim 31

should be withdrawn. Claim 32 depends from claim 31 and is allowable for the same reasons.

iv. Claim 33

Claim 33 depends from claim 31 and is allowable for all the reasons discussed above in connection with claim 31.

In addition, claim 33 recites additional features which are not disclosed or suggested in either Boved or Bertoldo. Claim 33 further recites that a protective projection extends from the second side of the second radial extension, the protective projection surrounding the dowel when it is held in the axial through hole at the second side of the second radial extension. As noted above in connection with claim 21, neither Boved nor Bertoldo disclose this feature. Accordingly, it is respectfully submitted that claim 33 is also allowable over even the improper combination of Boved and Bertoldo. Withdrawal of the rejection of claim 33 on these additional grounds is respectfully requested.

D. Claim 34

Claim 34 is rejected under 35 U.S.C. §103(a) over Boved, in view of Bertoldo, and further in view of Pliml.

As noted above in connection with claim 31, the combination of Boved and Bertoldo is improper. Withdrawal of the rejection of claim 34 on these grounds alone is respectfully requested.

In addition, claim 34 depends from claim 33. As explained above, neither Boved nor Bertoldo disclose or suggest the protective projection recited in claim 33. The Pliml reference fails to cure this deficiency of Boved and Bertoldo. Thus, for the same reasons given above in connection with claim 33, it is respectfully submitted that claim 34 is allowable over even the improper combination of Boved, Bertoldo and Pliml. Withdrawal of the rejection of claim 34 on these additional grounds is respectfully requested.

E. Claim 39

Claim 34 is rejected under 35 U.S.C. §103(a) over Boved, in view of Bertoldo, and further in view of Morel.

Claim 39 depends from claim 31. As noted above in connection with claim 31, the combination of Boved and Bertoldo is improper. For the same reasons, it is respectfully submitted that the combination of Boved, Bertoldo and Morel is likewise improper. Withdrawal of the rejection of claim 39 on these grounds is respectfully requested.

F. Claims 19, 20 and 27

Claims 19, 20 and 27 are rejected under 35 U.S.C. §103(a) over Boved, in view of Bertoldo, and further in view of Iguchi.

Claims 19, 20 and 27 depend from claim 23. As noted above in connection with claim 23, the combination of Boved and Bertoldo is improper. For the same reasons, it is respectfully submitted that the combination of Boved, Bertoldo and Iguchi is likewise improper. Withdrawal of the rejection of claims 19, 20 and 27 on these grounds is respectfully requested.

8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejection.

Respectfully submitted,

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CLAIMS APPENDIX

1-12. Canceled

13. (Rejected) The lye container according to Claim 23, wherein the front section of the opening has a diameter which increases from inside to outside.

14-18. Canceled.

19. (Rejected) The lye container according to Claim 27, wherein the dowel is held at a first end of the axial through hole by means of the fixing ribs before it is moved along the axial through hole to a second end of the axial through hole adjacent the outer end of the pin.

20. (Rejected) The lye container according to Claim 19, wherein the first end of the axial through hole has an entry section having a diameter larger than that of the dowel.

21. (Rejected) The lye container according to Claim 23, wherein a concentric protective projection is formed on the second container portion around a first end of the axial through hole that is opposite the outer end of the pin, the concentric protective projection protecting the dowel when it is held at the first end of the axial through hole.

22. Canceled.

23. (Rejected) A lye container for a washing machine, the lye container comprising: a first container portion and a second container portion removably connected to one another, the first container portion having a first radial

extension having a front section facing the second container portion and a rear section facing away from the second container portion;

an opening extending through the first radial extension and having an inner diameter, the diameter near the rear section being greater than the diameter near the front section;

the second container portion having a second radial extension being removably engagable with the first radial extension, the engagement of the first and second radial extensions helping to create a seal between the first and second container portions;

a pin extending in an axial direction from the second radial extension to an outer end and having an outer diameter, an axial through hole, and longitudinal grooves extending along the pin, the maximum outer diameter of the pin being greater than the minimum inner diameter of the opening, the pin being at least partially disposed within the opening when the second radial extension engages the first radial extension; and

a dowel removably disposed within the axial through hole and helping maintain the second radial extension in engagement with the first radial extension.

24. (Objected to) The lye container according to Claim 23, wherein the first radial extension includes stops formed on the inner diameter of the opening near the rear section of the opening, the stops limiting an insertion depth of the pin in the opening.
25. (Rejected) The lye container according to Claim 23, wherein the dowel expands the outer end of the pin outwardly to engage the opening.
26. (Rejected) The lye container according to Claim 23, wherein the opening near the rear section defines a truncated cone.

27. (Rejected) The lye container according to Claim 23, wherein the axial through hole include fixing ribs to help retain the dowel in the desired position.
28. (Rejected) The lye container according to Claim 23, wherein the first container portion includes multiple first radial extensions having openings and the second container portion includes multiple second radial extensions having pins, each pin being aligned with a corresponding opening.
- 29-30. Canceled.
31. (Rejected) A lye container for a washing machine, the lye container comprising:
 - a first container portion having a first radial extension with first and second sides, wherein an opening passes through the first radial extension from the first side of the first radial extension to the second side of the first radial extension, and wherein an inner diameter of the opening increases from an interim portion of the opening to the second side of the first radial extension;
 - a second container portion having a second radial extension with first and second sides, wherein the first side of the second radial extension is removably joined to the first side of the first radial extension to form the lye container, wherein a pin having expandable sidewalls extends from the first side of the second radial extension, the pin having an outer diameter that is larger than a minimum inner diameter of the opening on the first radial extension, the pin being at least partially disposed within the opening when the second radial extension engages the first radial extension, and wherein an axial through hole extends from the first side of the second radial extension, through the pin, to the second side of the second radial extension; and
 - a dowel that is removably disposed within the axial through hole, wherein when the dowel is disposed within the pin, the dowel expands the sidewalls of

the pin outward so that they engage the inner diameter of the opening in the first radial extension to fix the second container portion to the first container portion.

32. (Rejected) The lye container of claim 31, wherein the dowel is held in the axial through hole at the second side of the second radial extension before the second container portion is removably joined to the first container portion, and wherein the dowel is moved along the axial through hole to a position inside the pin to removably join the second container portion to the first container portion
33. (Rejected) The lye container according to claim 32, wherein a protective projection extends from the second side of the second radial extension, the protective projection surrounding the dowel when it is held in the axial through hole at the second side of the second radial extension.
34. (Rejected) The lye container of claim 33, wherein the end of the axial through hole adjacent the second side of the second radial extension is shaped like a truncated cone, with the largest diameter portion of the truncated cone forming the opening of the axial through hole at the second side of the second radial extension.
35. (Objected To) The lye container of claim 34, further comprising a plurality of insertion stops formed on the first radial extension, the insertion stops limiting an amount that the pin of the second radial extension can be inserted into the opening of the first radial extension.
36. (Objected To) The lye container of claim 35, wherein the plurality of insertion stops are projections formed on the inner diameter of the opening, the projections contacting an end of the pin when it is inserted into the opening.

37. (Objected To) The lye container of claim 31, further comprising a plurality of projections formed on inner diameter of the opening of the first radial extension, the projections contacting an end of the pin as the pin is inserted into the opening to limit an amount that the pin can be inserted into the opening.
38. (Objected To) The lye container of claim 37, wherein the plurality of projections also contact an end of the dowel when the dowel is moved along the axial through hole to limit an amount that the dowel can travel along the axial through hole.
39. (Rejected) The lye container of claim 31, wherein when the dowel is disposed within the pin, the entire shaft of the dowel is accommodated within the axial through hole.
40. (Rejected) The lye container of claim 39, further comprising projection stops that limit the amount that the dowel can travel along the axial through hole such that when the dowel is moved to a position inside the pin, the dowel is prevented from projecting out of the pin.

ATTORNEY DOCKET NO.: 2002P01188WOUS

EVIDENCE APPENDIX

None

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RELATED PROCEEDINGS APPENDIX

None